National Institute of Environmental Health Sciences

Apparent temperature and cause-specific emergency hospital admissions in Greater Copenhagen, Denmark

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Year: 2011
Journal: PLoS One. 6 (7): e22904

Abstract:

One of the key climate change factors, temperature, has potentially grave implications for human health. We report the first attempt to investigate the association between the daily 3-hour maximum apparent temperature (Tapp(max)) and respiratory (RD), cardiovascular (CVD), and cerebrovascular (CBD) emergency hospital admissions in Copenhagen, controlling for air pollution. The study period covered 1 January 2002-31 December 2006, stratified in warm and cold periods. A case-crossover design was applied. Susceptibility (effect modification) by age, sex, and socio-economic status was investigated. For an IQR (8 degrees C) increase in the 5-day cumulative average of Tapp(max), a 7% (95% CI: 1%, 13%) increase in the RD admission rate was observed in the warm period whereas an inverse association was found with CVD (-8%, 95% CI: -13%, -4%), and none with CBD. There was no association between the 5-day cumulative average of Tapp(max) during the cold period and any of the cause-specific admissions, except in some susceptible groups: a negative association for RD in the oldest age group and a positive association for CVD in men and the second highest SES group. In conclusion, an increase in Tapp(max) is associated with a slight increase in RD and decrease in CVD admissions during the warmer months.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3146500

Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Policymaker

Exposure : ☑

weather or climate related pathway by which climate change affects health

Air Pollution, Temperature

Geographic Feature: ☑

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Denmark

Health Impact:

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Injury, Respiratory Effect

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Elderly, Low Socioeconomic Status

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content